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ABSTRACT

This study evaluated effects of a direct instruction main idea summarization program and a self-monitoring technique on the reading comprehension of four sixth-grade students with learning disabilities. A multiple probe across student design was used. One student did not receive instruction and served as a control subject. Student performance was assessed after the main idea instruction and self monitoring training. Results indicated that the main idea instructional program produced increases in identifying and generating main ideas, and the high levels of performance were surpassed by gains demonstrated as a result of the self-monitoring program in which students monitored their use of the summarization strategies. Student interviews indicated that the strategy was beneficial in understanding textual information. Results of a maintenance probe conducted with the four trained students at either 6, 10, and 16 weeks following the study did not, however, find program benefits had been maintained. Examples of the seven-lesson instructional program are attached. (DB)

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Running Head: MAIN IDEA INSTRUCTION

ED 420 122

Enhancing Reading Comprehension: The Role of a Summarization Strategy and Self-monitoring

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Abstract

We investigated the effects of a direct instruction main idea summarization program and a self-monitoring technique on the reading comprehension of four sixth grade students with learning disabilities (3 boys, 1 girl). A multiple probe across students design was used. One student in the study did not receive instruction and served as a control subject due to time constraints. Student performance was assessed after the main idea instruction and self monitoring training. In addition, maintenance of word problem solving was probed at 16, 10, and 6 weeks following the study for Students 1, 2, and 3 respectively. Results indicated that the main idea instructional program produced increases in identifying and generating main ideas, and the high levels of performance were surpassed by gains demonstrated as a result of the self-monitoring instruction. Student interviews indicated that the strategy was beneficial in understanding textual information.

Effects of a Direct Instruction Main Idea Summarization Program and Self-Monitoring on Reading Comprehension of Middle School Students with Learning Disabilities

Problem Statement

Research on main idea instruction using the principles of DI with children with disabilities remains unvalidated. In fact, previous research has not addressed (a) the effects of training in step-by-step main idea summarization strategies articulated by Carnine, Silbert, and Kameenui (1990), (b) the generalization of performance gains of these strategies to expository material, or (c) individual student responses as opposed to group responses. It is equally important for practitioners and researchers to be informed of both group and individual student effects of strategy instruction.

Purpose

The primary purpose of this study was to investigate the effects of main idea summarization instruction articulated by Carnine, Silbert, and Kameenui (1990) on the reading comprehension of middle school students with learning disabilities. In addition, the present investigation was designed to examine whether employing the main idea instructional program in combination with a self-monitoring technique as in the Graves (1986) and Malone and Mastropieri (1992) studies would improve students' comprehension performance and demonstrate transfer of learned skills to expository materials.

Method

Participants and Setting

Four culturally diverse students (3 males; 1 female) with learning disabilities participated in the study. Students were selected for the study on the basis of three criteria: (a) judged by their teachers to be adequate decoders but poor comprehenders, (b) scored at least 2 years below grade level on the Woodcock Reading Mastery comprehension test, and (c) performance on a criterion test of main idea comprehension did not exceed 50%.

Measures

Probe Measures. Sets of narrative passages similar to the training passages were developed for use during probe sessions. Each passage was three to five sentences in length. Student comprehension of main ideas of narrative passages was assessed with 8-item tests that coprised both multiple choice and one sentence main idea generation responses. Two of the eight narrative passages were selected from the basal reading program used in the students' classroom. In addition, expository passages derived from the students' content area textbooks (i.e., science and social studies) were modified and used for generalization probes. Student comprehension of main idea of expository passages was assessed with 2- to 5-item tests that comprised both multiple choice and one sentence main idea production responses. With the exception of the first probe condition (P1), all subsequent probes included 5 items that assessed main idea comprehension of expository passages.

Social validity. The participating students were interviewed at the end of the study to assess the social validity of the summarization intervention. Students were individually asked to rate five questions regarding the effectiveness and usefulness of the strategy instruction on a scale of 1 to 5, with 5 being most useful and 1 representing least useful. In addition, they were asked to respond to five other questions on strategy application and satisfaction.

Experimental Design

A multiple-probe across students single subject design was employed.

Procedure

Probe Procedures. During each probe condition, no instruction was provided. Each student completed worksheets that included the 8-item and 2 or 5-item tests described earlier for a total of 10-13 items. Eric completed only the 8-item narrative passages' and 2-item expository passages' tests. The instructors only provided assistance with difficult to read words and no other help was given to the students.

Main Idea Intervention Procedure. The main idea instructional program consisted of a series of seven lessons adapted from the teaching procedures recommended by Carnine et al.

(1990). The lessons were carefully sequenced to reflect a progression from easier to more difficult task demands, and all the passages used in the instruction were simple to allow for student success. Scripted lessons were used and instructors were counterbalanced across sessions to minimize the effects of instructional style on the dependent variable. A mastery learning paradigm was used in each main idea lesson to ensure that students learned the main idea generation and identification strategies.

At the end of each lesson, the student completed a 10-item main idea comprehension worksheet. Initially, the student was working on a passage with specific response requirements related to the taught lesson. Later, when the student had completed instruction in all six main idea lessons, worksheets with 10 items that included the different passage specifications and responses from the different lessons were presented for discrimination practice. Instructions for completing the worksheet were similar to those given during the probe conditions.

The main idea training phase lasted an average of 8 days, with sessions continued until the student reached mastery (90% correct or better) in identifying or generating main ideas for each lesson. Training for each lesson ranged from 1 to 3 days and lasted from 40 to 50 minutes per session.

Self Monitoring Procedure. In this phase, students were taught to monitor their use of the summarization strategies learned during the main idea instructional phase. They were provided with prompt cards that delineated the steps for finding the main idea in passages. A sample of the monitoring card is presented in Table 1. The self-monitoring sessions were continued until every student reached 80% correct or better mastery of the self-monitoring steps. All students needed only two days of self -monitoring training to reach criterion.

<Table 1 About Here>

Maintenance and Generalization Procedures. After the completion of the study, we conducted one maintenance probe on Subjects 1, 2, and 3 at 16, 10, and 6 weeks respectively. Procedures for conducting these probes were similar to the probe condition procedures. Generalization information was obtained by collecting data on the generalization sets, which

included all main idea comprehension items based on expository passages. The generalization set was used to assess the generalization effect of the strategy instruction and self-monitoring to novel material (expository).

Results

Probes

Figure 1 presents the percentage of items scored correct on the comprehension tests for Chris, Tanya, Brian, and Ed. The figure shows increases in reading comprehension for Chris, Tanya, and Brian in all sessions following instruction in identifying and generating main ideas. Furthermore, these high levels of performance were surpassed by gains demonstrated as a result of the self-monitoring instruction.

<Figure 1 About Here>

Discussion

Findings from the present investigation suggest the main idea summarization instruction program (Carnine et al., 1990) was associated with increased reading comprehension of middle school students with learning difficulties. Performance on narrative passages improved for all students following direct instruction in the use of this strategy. In contrast, the performance of the control participant remained unchanged throughout the study. This is consistent with findings decribed by Gajria and Salvia (1992). Unfortunately, the increases, from failing levels during the initial probe condition to only minimally acceptable levels for one of the three participants following summarization instruction, would probably be considered insignificant from a teacher's standpoint. Additional positive effects were seen following instruction in self-monitoring for two of the three experimental participants. Chris and Tanya achieved scores well within passing levels (means 92% and 83%, respectively) immediately following self-monitoring. Although Brian required an additional booster session, similar outcomes were eventually observed during his final probe phase (mean 83%). It appears that the effects of the summarization instruction program can be enhanced for some students using self-monitoring.

The main idea summarization instruction was also associated with slight increases in the expository passage generalization probes for all three experimental participants. Apparently students were generalizing the summarization skills they had learned to other types of passages. This is an exciting finding given the relatively brief training provided and the severity of students' learning difficulties. Performance on generalization probes was further enhanced immediately following self-monitoring instruction for Chris and Tanya, and later following the booster session for Brian. Again, students apparently were applying self-monitoring skills to new types of passages. Future research should attempt to replicate and extend these findings.

Unfortunately, self-monitoring was not associated with maintenance of these beneficial effects. This is consistent with the self-monitoring literature that suggests reactive effects of self-monitoring typically do not maintain over time without some additional reinforcement for appropriate behavior (e.g., Shapiro & Cole, 1994). There appears to be an inverse relationship between the passage of time and maintenance of effects, whereby the greater the interval between probes, the less the maintenance of effects. Providing students weekly booster sessions may be a relatively simple strategy for enhancing long-term maintenance of beneficial effects of self-monitoring.

A limitation of the present study was the small number of items (two) included in each expository passage test during the first probe (P1) condition. Future replications should include at least the same number of items in all tests. Finally, all instruction in this study was provided individually to students. This individual attention may account for some of the student gains observed. Future research is needed to attempt to control for this attention variable. The combined summarization strategy instruction and self-monitoring package appears to be an effective means to improve students' comprehension scores and this type of research is seen as a valuable investment.

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Table 1

Self-monitoring prompt card

FINDING THE MAIN IDEA

Does the paragraph tell about:

I. **Subject** Action

Single person _____ Category _____

Group _____ Category _____

OR

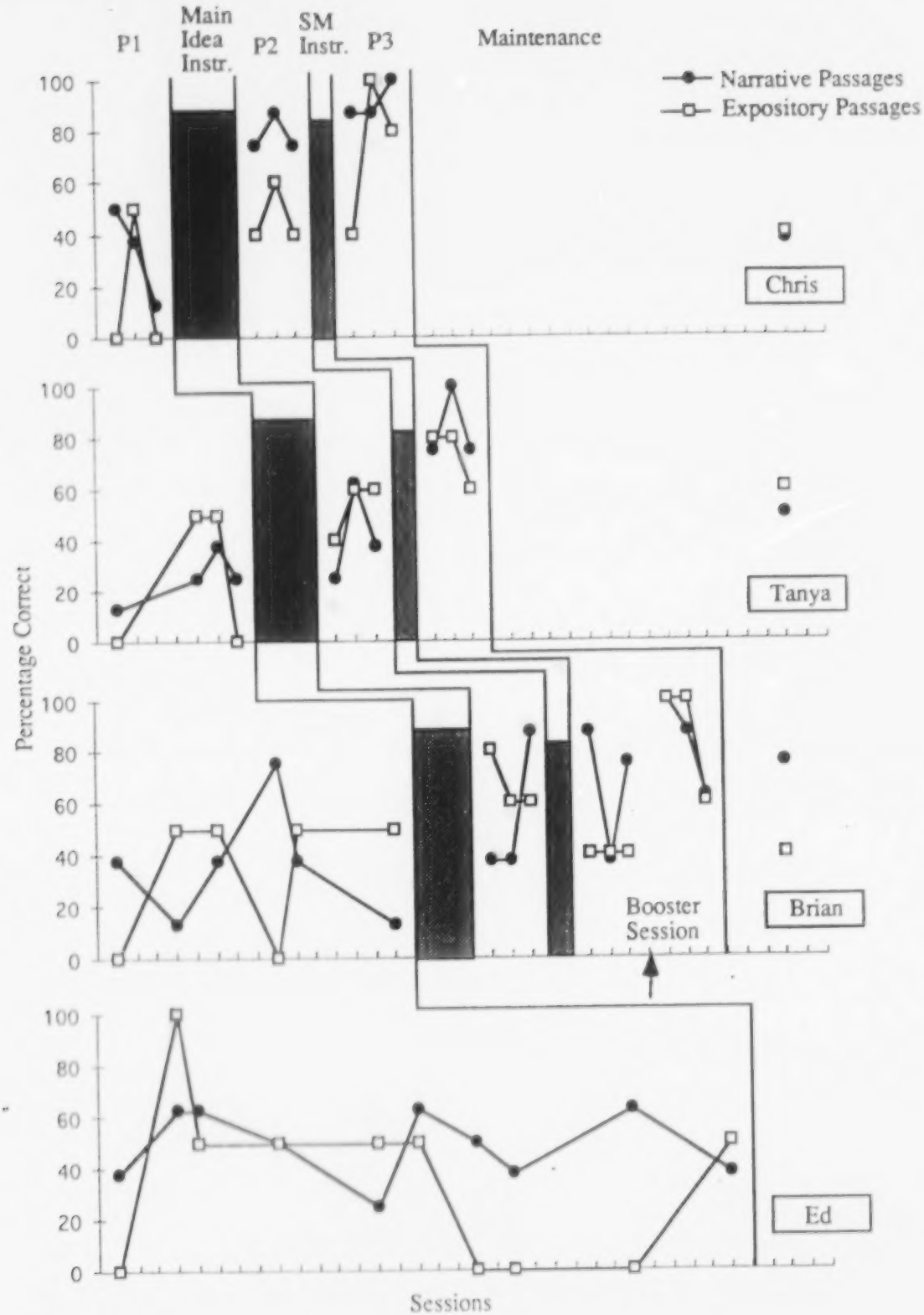
II. Why something happened _____

Where something is or happened _____

When something happened _____

How something looks or is done _____

Remember: Some paragraphs contain sentences (distracters) that do not tell about the main idea!


P1
Main Idea Instr.
P2
SM Instr.
P3
Maintenance
Narrative Passages
Expository Passages
Chris
Tanya
Brian
Ed
Booster Session
Percentage Correct
Sessions
0
20
40
60
80
100

Main Idea Comprehension Instructional Program

Lesson #1: Main-idea single-person class action

Main Idea Sentence Writing Rule: "Name the person and tell the main thing the person did in all the sentences" (Carnine et al., 1990, p. 299).

The little bird gathered some sticks from the ground. She took them to the apple tree. She wove the sticks together. Then she added bits of string to make her nest soft.

Generate main idea sentence: The little bird built a nest.

Lesson #2: Main-idea multiple-person thing class action.

Main Idea Rule: "Name the group and tell the main thing the group did."

John threw the football to Mark. Mark ran down the field. Tom and Bill tackled Mark.

Generate a main idea sentence: The men played football.

Lesson #3: Multiple choice items

Instructional Procedure: "Read the passage and critically evaluate all the options prior to selecting the main idea sentence that best describes the passage."

First, Ramon watched the marching band go by. Next, a big float came down the street. He saw many more bands and many more floats.

Select the main idea:

a. Parades are fun.
b. Marching bands are loud.
c. Ramon watched a parade.
d. Ramon jumped up and down.

Lesson #4: Passages with sentence distracters

Rule for Creating a Main Idea: "Tell the main thing the person or group did in most of the sentences."

First, the doctor listened to Ben's heart. Then he looked in Ben's ears and mouth. Ben thought the nurse was nice. Finally, the doctor told Ben that he was very healthy.

Generate a main idea sentence: The doctor examined (or checked) Ben.

Lesson #5: Multiple choice items in which the options are introduced as *why* and *where* questions

Instructional Procedure: "Examine each possible main idea option and note how many sentences tell about that particular main idea."

Rule: "If most of the sentences in the passage discuss the option, then that sentence is the main idea of the passage."

Football is a lot of fun. You can play football in your own backyard, if there is plenty of room. You can play football in the park, if there aren't too many people or trees. You can also play football on a soccer field.

a. What you can do in a street.
b. Where you can play football.
c. Why football is fun.
d. When you can play football.

Lesson #6: Multiple choice items in which the options are introduced as *when something happened, how something is done,* and *how something looks* questions

Instructional Procedure: "Examine each possible main idea and note how many sentences tell about that particular main idea."

My little sister has a funny way of putting on her coat. She lays it on the floor with the collar by her feet. She reaches down and puts both of her hands into the sleeves. Then she flips the coat over her head and it is on.

a. How my sister puts on her coat.
b. Why my sister puts on her coat.
c. When my sister puts on her coat.
d. How my sister acts.

Lesson #7: Main idea review

Instructional Procedure: Review various types of items from lessons 1-6 and have students apply the strategies learned to narrative passages derived from their basal reading programs.